

Department of Energy

Golden Field Office 1617 Cole Boulevard Golden, Colorado 80401-3393

May 1, 2012

TO:

Distribution List

SUBJECT:

Notice of Scoping - The Green Energy School Wind Turbine Project on Saipan,

Commonwealth of the Northern Mariana Islands

The U.S. Department of Energy (DOE) provided federal funding in the amount of ~\$18.6 million to the Commonwealth of Northern Mariana Island (CNMI) under the DOE's *American Recovery and Reinvestment Act of 2009* State Energy Program (SEP) to develop renewable energy resources that improve the reliability of energy supply and reduce energy costs.

The CNMI has used a portion of their funding for the Green Energy School Project, which provide energy to CNMI schools. The Green Energy School Project is administered by the Department of Public Works and implemented by the CNMI Department of Education and Public School System (PSS). PSS proposes to use ~\$1.5 million dollars of SEP funding to install six, 20 kW and six, 2.4 kW unit wind turbines on the island of Saipan (proposed project). The attached project description details the proposed project and its locations.

Pursuant to the requirements of the National Environmental Policy Act (NEPA), the Council on Environmental Quality (CEQ) regulations (40 CFR Parts 1500 to 1508), and DOE's NEPA implementing procedures (10 CFR Part 1021), DOE is preparing a draft environmental assessment (EA) to:

- Identify any potential adverse effects and associated mitigation measures should this proposed action be implemented;
- Evaluate viable alternatives to the proposed action, including a no action alternative;
- Describe the relationship between local short-term uses of the environment and the maintenance and enhancement of long-term productivity; and
- Characterize any irreversible commitments of resources that would be involved should this
 proposed action be implemented.

The EA will identify, describe, and determine potential impacts, if any, on the environment that would be caused by the project and will identify possible mitigation measures to reduce or eliminate those impacts, as appropriate. At a minimum, DOE will evaluate the potential impacts to the following resource areas:

- Land Use
- Biological Resources
- Cultural Resources
- Noise
- Safety and Occupational Health
- Socioeconomics and Environmental Justice
- Utilities
- Traffic and Transportation

- Aviation Hazards
- Electromagnetic Interferences
- Aesthetics and Shadow Flicker

DOE will make this letter available to interested federal, state, and local agencies so they may provide information on issues to be addressed in the EA. Agencies are invited to identify the issues within their statutory responsibilities that should be considered in the EA. The general public is also invited to submit comments on the scope of the EA.

NEPA requires DOE to consider a reasonable range of alternatives to the proposed action during an environmental review. The definition of alternatives is governed by the "rule of reason." An EA must consider a reasonable range of options that could accomplish the agency's purpose and need and reduce environmental effects. Reasonable alternatives are those that may be feasibly carried out based on environmental, technical, and economic factors. The EA will address the No Action Alternative, in which DOE would not allow federal funding to be used for the proposed project. DOE assumes for purposes of the analysis that the PSS would not proceed with the proposed wind turbines without DOE's assistance.

DOE invites the public and agencies to identify issues that they feel the Department should consider in the EA. The Department will post the draft EA in the DOE Golden Field Office online reading room later this year at http://www.eere.energy.gov/golden/Reading_Room.aspx.

The DOE Golden Field Office welcomes your input throughout DOE's NEPA process, but to insure that your comments are received in time for consideration in the EA, please provide comments on or before May 16, 2012 to:

Melissa Rossiter
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We look forward to hearing from you.

Sincerely,

Melissa Rossiter

NEPA Document Manager

Enclosures:

Attachment The Green Energy School Wind Turbine Project on Saipan, CNMI Proposed Project Description and Location

The U.S. Department of Energy (DOE) provided federal funding in the amount of \$18.6 million to the Commonwealth of Northern Mariana Island (CNMI) under the DOE's *American Recovery and Reinvestment Act of 2009* State Energy Program (SEP) to develop renewable energy resources that improve the reliability of energy supply and reduce energy costs.

The CNMI has used a portion of their funding for the Green Energy School Project, which provide energy to CNMI schools. The Green Energy School Project is administered by the Department of Public Works and implemented by the CNMI Department of Education and Public School System (PSS). PSS proposes to use ~\$1.5 million dollars of SEP funding to install six, 20 kW and six, 2.4 kW unit wind turbines on the island of Saipan (proposed project).

The proposed project would consist of two sizes of wind turbines: 20 kW and 2.4 kW. The 20 kW turbine and tower consists of an 80 foot monopole with a top mounted Jacobs 20 kW wind turbine (Figure 1). The Jacobs wind turbine has a 31 foot rotor diameter with a rotor swept area of 755 square feet. Total turbine height with blades would be 95.5 feet. Six of these wind turbines would be installed in an open grass field between the Saipan Southern High School and Koblerville Elementary School. The wind turbines at all other locations would be 2.4 kW wind turbines. The 2.4 kW turbine consists of a 33 foot monopole with a top mounted Skystream 2.4 kW wind turbine (Figure 2). The Skystream wind turbine has a 12 foot rotor diameter with a rotor swept area of 115 square feet. Total turbine height with blades would be 39 feet. These proposed wind turbines are small in comparison to commercial-scale wind turbines.

The following paragraphs describe the individual wind turbine proposed projects. The operational lifespan of the turbines is estimated to be 20 years. No native habitat would be disturbed. A small area would be disturbed during installation of the turbine foundations. All turbines would be installed in open, maintained grass fields or existing disturbed areas on school property and connected to the electrical system for the respective schools and local electrical grid as appropriate.

Saipan Southern High School and Koblerville Elementary School – The proposed project consists of installing six, 20 kW Jacob turbines and one, 2.4 kW Skystream turbine in a maintained grass field between the Saipan Southern High School and the Koblerville Elementary School. This project would require clearing of 1.0 hectare of nightingale reed-warbler habitat in order to minimize the effects of wind turbines on nightingale reed-warblers. Project activities would include clearing vegetation and use of heavy equipment (Figure 3).

Kagman High School – The proposed project consists of installing one, 2.4 kW Skystream wind turbine at Kagman High School. The Kagman region of Saipan lies on the east coast of the island. The wind turbine would be located on the south side of the school property in a grass field (Figure 4).

Cha Cha Oceanview Junior High School – The proposed project consists of installing one, 2.4 kW Skystream wind turbine at Cha Cha Oceanview High School. The junior high school is located in the Kagman region of Saipan and is about 0.25 miles southwest of Kagman High School. The wind turbine would be located on the south side of the school property in a grass field (Figure 4).

Gregorio T. Camacho Elementary School – The proposed project consists of installing one, 2.4 kW Skystream wind turbine at Gregorio T. Camacho Elementary School located along the northwest coast of Saipan in the community of San Roque. The wind turbine would be placed in a large open field (220 x 220 feet) between the school and the ocean (Figure 5).

Garapan Elementary School – The proposed project consists of installing two, 2.4 kW Skystream wind turbines at Garapan Elementary School located in the middle of the west coast of Saipan. The area lies within the community of Garapan approximately 0.4 miles from the coast.

Mitigation Plans and Measures

DOE and the CNMI have developed and propose the following plans and measures to mitigate potential impacts on the Mariana swiftlet (*Aerodramus bartschi*) and the nightingale reed-warbler (*Acrocephalus luscinia*) related to implementation of the CNMI Green Energy School Project.

Construction Measures

CNMI will ensure that prior to installation of the turbines, one blade will be painted black and two will be painted white in an effort to improve visibility during daylight hours. Additionally, unless required for aviation safety, no lighting will be attached to turbine towers, which should reduce attractiveness to birds.

Monitoring

Because suitable reed-warbler habitat exists around the project locations, annual detection surveys will be conducted at each site to determine whether reed-warblers have established territories near the project sites. Currently, the Southern Saipan High School is the only site with known reed-warbler territory.

In order to determine actual impacts on aerial vertebrates, mortality monitoring will be conducted at each project location, except the elementary school in Garapan and the two schools on the island of Tinian, where DOE has determined no effect on any listed species. The Mortality Monitoring Plan (MMP) describes the procedures, methods and roles and responsibilities for monitoring potential wildlife fatalities during the operation of the wind turbines. The program will monitor the wildlife mortality or injury.

Habitat Mitigation

An existing reed-warbler territory is located on school property at the Southern Saipan School. To offset the potential loss of reed-warbler habitat, a request will be made to the CNMI Department of Land and Natural Resources to donate a free credit to the Saipan Upland Mitigation Bank for use by the project.

Mariana swiftlet habitat may not be directly impacted, but potential take of swiftlets could occur during the 20 year lifecycle of the proposed project. To offset potential take of swiftlets, DOE and CNMI propose trapping non-native cockroaches (*Periplanet americana*) at one or more of the limestone caves used by swiftlets for night roosting and nesting.

Figure 1: Jacobs 20 kW wind turbine. *Please note the 20 kW turbines at Southern Saipan High School would be installed on monopole towers and not lattice towers as illustrated below.



Figure 2: Skystream 2.4 kW wind turbine



Figure 3: Location of the proposed six, 20 kW wind turbines at the Saipan Southern High School and the one, 2.4 kW wind turbine at Koblerville Elementary School on the island of Saipan. The red lines indicate location of the wind turbines.



Figure 4: Location of the proposed 2.4 kW wind turbine at Kagman High School and at Cha Cha Oceanview Junior High School on the island of Saipan. The Kagman Wildlife Conservation Area is located on the right side of the figure. The location of the wind turbines is indicated by the red line.



Figure 5: Location of the proposed 2.4 kW wind turbine at Gregorio T. Camacho Elementary School in the village of San Roque on the northwest coast of Saipan. The red line indicates the approximate location of the wind turbine.

